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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,635	12/12/2000	Hidetaka Oka	A-22141/US/A/CGJ 118	4752
324	7590	08/26/2009		
JoAnn Villamizar Ciba Corporation/Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591			EXAMINER ROBINSON, CHANCEITY N	
			ART UNIT 1795	PAPER NUMBER
			NOTIFICATION DATE 08/26/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/734,635	Applicant(s) OKA ET AL.	
	Examiner CHANCEITY N. ROBINSON	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Based on applicant's request to withdraw the appeal on 01/13/2006, prosecution has been reopened.
2. Claims 1-3 have been canceled. Claim 4 has been amended. Claims 19-20 have been added. Claims 4-20 are currently pending.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 5-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 5-18 are dependent on claim 1, which was canceled by the applicant on 01/13/2006. Examiner notes claims can not depend on cancel claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

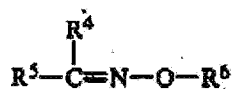
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6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 4 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laridon et al. (US 4,282,309 A).

Regarding claims 4 and 19-20, Laridon et al. teach a photosensitive composition suited for the production of polymer resist images comprising a mixture of (1) a photopolymerizable ethylenically unsaturated compound, (2) at least one oxime ester photopolymerization initiator, and (3) at least one sensitizer (abstract). Specific oxime esters are represented by the formulae:



,wherein R⁴ represents a C₁₋₂ alkyl group, an aryl group, an alkaryl group, an aralkyl group, a hydroxy-substituted aralkyl group or a substituted or unsubstituted acyl group. R⁵ is a hydrogen atom, a C₁₋₂ alkyl group, an aryl group, or a substituted or unsubstituted acyl group. R⁶ represents a substituted or unsubstituted acyl group (c. 2, 1.44-68). It is the examiner's position that when R⁵ is hydrogen and R⁴ is alkaryl, the limitations of claimed formula (I) are met wherein Ar₁ is a C₆₋₂₀ aryl substituted with a C₁₋₂₀ alkyl group. The photosensitive recording composition of the taught invention can be coated in the form of a layer on a support (c. 6, 1. 3-5). It may comprise one or more ethylenically unsaturated polymerizable compounds such as

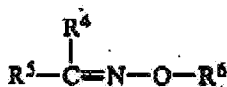
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styrene, acrylamide, acrylonitrile and methyl methacrylate (c. 6, 1.5-11). The photosensitive layer preferably comprises plurally unsaturated photopolymerizable compounds such as divinylbenzene, diglycol diacrylates, and pentaerythritol triacrylate (c. 6, 1.29-40). The said photopolymerizable Compound can be used together with a polymeric binding agent. Suitable binding agents are polystyrene, polyvinyl acetate, copolymers of acrylic acid, methacrylic acid and unsaturated dicarboxylic acids such as maleic acid. Especially suitable are the alkali soluble copolymers of methyl methacrylate and methacrylic acid (c. 7, 1. 1-46),

Laridon et al. teach many uses of the taught invention. If the support is made of a transparent resin or glass, photosensitive layers containing dyes or pigments can be used to make transparencies. If the support is made of an opaque paper, and the photosensitive layer contains dyes or pigments, opaque color proofs can be made by washing off. If the support is made of metal a photoresist can be prepared with a photosensitive coating according to the taught invention wherein the resist can be used as an etch resist (c. 8, l. 28-38). For the production of planographic printing plates, intaglio and relief images, and printed circuits, the substrates may be stone, paper, and metal based materials suitable for etching (c. 8, 1.39- 58). In the production of miniaturized integrated electrical components, the photosensitive composition serves as a shielding pattern on a semiconductor substrate wherein the desired electronic properties are added by techniques such as ion implantation, electrode-less deposition, ion milling or etching (c. 8, 1.59-66). One of ordinary skill in the art would have been motivated by these teachings to coat the taught composition in combination with pigment or dye onto a transparent substrate comprising an electrode in order to obtain a desired electronic component (i.e., a color filter).

The photosensitive recording material is prepared by coating the taught photosensitive layer on a selected substrate by known coating techniques. The coating composition may comprise besides the taught ingredients, matting agents, antistatic agents, coating aid. Examples include silica particles, which meet the limitation of inorganic filler as set forth in instant claim 10. Before their application in the form of a coating these ingredients are dissolved in a low boiling solvent, which is removed by evaporation after coating (c. 9, I. 45-60). The photosensitive coating is exposed to actinic radiation whereby the exposed areas are polymerized and the unexposed portions are removed by washing with a solvent (c. 10, 1.43-68). Any source of actinic radiation can be used in the range of 200- 400 nm (c.11, 1.3-15). See also claims 1, 3 and 5-9.

One of ordinary skill in the art would have been motivated by the teachings of Laridon to make a photosensitive composition comprising (1) a photopolymerizable ethylenically unsaturated compound; (2) at least one oxime ester photopolymerization initiator



represented by the formulae: wherein R5 is hydrogen and R4 is alkaryl; and (3) at least one sensitizer (abstract) in order to make a photosensitive coating which can be used in a large variety of applications.

Response to Arguments

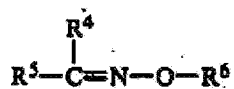
8. Applicant's arguments filed 01/13/2006 have been fully considered but they are not persuasive. Applicant's principle arguments are

A) In canceling claim 1, Applicants remove from present consideration a number of compounds. This should facilitate the arguments presented below, and made previously, that the

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data of record are sufficient to demonstrate unexpected results commensurate with the scope of the claims.

A) The examiner respectfully disagrees. Examiner notes Laridon et al. continue to disclose a specific oxime esters are represented by the formulae:



(c. 2, 1.44-68), which meets the limitation of the instant application claim 4, compound of formula (I). Therefore, rejection is maintained.

B) A distinct feature of the instant invention is the exceptional and previously undisclosed activity of aldoximes relative to ketoximes, i.e., compounds wherein the H of formula I or II is another, larger substituent. The data presented in the Oka declaration found in the appeal brief clearly demonstrates the superiority of aldoximes of the instant invention where R2 is benzoyl relative to similar compounds of the closest cited art (Laridon).

B) The examiner respectfully disagrees. The inventive compounds of the said declaration (B1 and B2) both exemplify R1 being unsubstituted benzoyl substituent having 6 carbon atoms. Claim 4m as written, specifically requires R1 to be a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl which are entirely different from the benzoyl group of the inventive compounds in the declaration. Applicants have offered no comparisons in the declaration of compounds having a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl as R1 as required in instant claim 4. Therefore, the examiner cannot make a direct comparison between the claimed invention of instant claim 4 and the cited art. The examiner maintains the position that Laridon teaches that R6 can be selected from the group including benzoyl, phenylsulphonyl, acetyl, or ethoxycarbonyl. Specifically, when

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R6 of Laridon is ethoxycarbonyl, the limitations of a C2-C5 alkoxy carbonyl as set forth in the instant claim 4 are met.

C) Preferred in Laridon is compounds wherein at least one of R4 or R5 is acyl, particularly benzoyl. However, Ar1 in the instant invention, corresponding to R4 or R5 of Laridon is never acyl. Laridon does not exemplify a compound where R5 is hydrogen. However, the instant invention relates specifically to the exceptional activity of compounds wherein the R5 position of Laridon is hydrogen.

C) The examiner respectfully disagrees. The inventive compounds of the said declaration (B1 and B2) both exemplify R1 being unsubstituted benzoyl substituent having 6 carbon atoms. Claim 4m as written, specifically requires R1 to be a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl which are entirely different from the benzoyl group of the inventive compounds in the declaration. Applicants have offered no comparisons in the declaration of compounds having a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl as R1 as required in instant claim 4. Therefore, the examiner cannot make a direct comparison between the claimed invention of instant claim 4 and the cited art. The examiner maintains the position that Laridon teaches that R6 can be selected from the group including benzoyl, phenylsulphonyl, acetyl, or ethoxycarbonyl. Specifically, when R6 of Laridon is ethoxycarbonyl, the limitations of a C2-C5 alkoxy carbonyl as set forth in the instant claim 4 are met.

D) The Examiner has requested that Applicants provide additional data directly comparing compounds where R1 is alkanoyl. Applicants respectfully maintain that the data in Tables 2 and 3 found on pages 61-64 of the specification, taken in combination with the data of the declaration make that additional work unnecessary. Applicants respectfully signed that in

light of this data one could reasonably expect that the activity of the compounds currently encompassed by the presently amended claims would be somewhat similar whether R1 is benzoyl or alkanoyl. Applicants also respectfully maintain that the showing superiority of these compounds to the closest exemplified art, the burden for showing unexpected results has been met.

D) The examiner respectfully disagrees. The inventive compounds of the said declaration (B1 and B2) both exemplify R1 being unsubstituted benzoyl substituent having 6 carbon atoms. Claim 4m as written, specifically requires R1 to be a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl which are entirely different from the benzoyl group of the inventive compounds in the declaration. Applicants have offered no comparisons in the declaration of compounds having a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl as R1 as required in instant claim 4. Therefore, the examiner cannot make a direct comparison between the claimed invention of instant claim 4 and the cited art. The examiner maintains the position that Laridon teaches that R6 can be selected from the group including benzoyl, phenylsulfonyl, acetyl, or ethoxycarbonyl. Specifically, when R6 of Laridon is ethoxycarbonyl, the limitations of a C2-C5 alkoxy carbonyl as set forth in the instant claim 4 are met.

E) *Applicants respectfully note that the Examiner maintains that when R6 of Laridon is ethoxycarbonyl and R5 is hydrogen, the limitations of claim 5 wherein R1 is C2-4 alkanoyl are met. Actually ethoxycarbonyl is not encompassed by alkanoyl and this assertion does not apply to claim 5. However, ethoxycarbonyl is encompassed in claim 4 where R1 is C2-C5 alkoxy carbonyl and so this point is addressed herein as it pertains to claim 4.*

E) Examiner agrees with Applicant that claims 4 of the instant application are met by Laridon reference. Examiner notes that claim 5 is dependent on claim 1, which was canceled by the applicant. Therefore, rejection is maintained.

F) Laridon does not exemplify compounds where R5 is hydrogen or compounds where R6 is ethoxycarbonyl. Laridon provides a formula (E), column 3, line 40, where R6 is ethoxycarbonyl. The compound of formula (E) contains at R4 and R5 rather larger substituent, i.e. phenyl and benzoyl, making such a compound quite different from the aldoximes of the instant invention. Furthermore, Laridon neither prepares nor treat a compound of formula (E) and there is no reason to be expecting from the disclosure the compound of formula (E) would be more active than the compound of formula (A).

F) The examiner respectfully disagrees. The inventive compounds of the said declaration (B1 and B2) both exemplify R1 being unsubstituted benzoyl substituent having 6 carbon atoms. Claim 4m as written, specifically requires R1 to be a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl which are entirely different from the benzoyl group of the inventive compounds in the declaration. Applicants have offered no comparisons in the declaration of compounds having a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl as R1 as required in instant claim 4. Therefore, the examiner cannot make a direct comparison between the claimed invention of instant claim 4 and the cited art. The examiner maintains the position that Laridon teaches that R6 can be selected from the group including benzoyl, phenylsulphonyl, acetyl, or ethoxycarbonyl. Specifically, when R6 of Laridon is ethoxycarbonyl, the limitations of a C2-C5 alkoxy carbonyl as set forth in the instant claim 4 are met.

G) Applicants respectfully assert that in light of the comparisons already of record and the discussion above there is provided no reason for Applicants to prepare and test such a compound as depicted by formula (E) as Applicants are obliged to compare compounds from the prior art, which are "actually taught" or exemplified, ex parte Westphal 223 USPQ 630.

G) Examiner respectfully disagrees. Laridon reference explicitly teach the compound, wherein R6 is ethoxycarbonyl meeting the limitation of claim 4, compound formula (I). There are reasons for Applicant to show a comparison between the instant applications and cited prior art.

H) Applicants respectfully maintains that they have surprisingly discovered that the aldoximes compounds in the claimed compositions and processes provide enhanced results not made obvious Laridon or other cited prior art.

H) The examiner respectfully disagrees. The inventive compounds of the said declaration (B1 and B2) both exemplify R1 being unsubstituted benzoyl substituent having 6 carbon atoms. Claim 4m as written, specifically requires R1 to be a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl which are entirely different from the benzoyl group of the inventive compounds in the declaration. Applicants have offered no comparisons in the declaration of compounds having a C2-C4 alkanoyl or C2-C5 alkoxy carbonyl as R1 as required in instant claim 4. Therefore, the examiner cannot make a direct comparison between the claimed invention of instant claim 4 and the cited art. The examiner maintains the position that Laridon teaches that R6 can be selected from the group including benzoyl, phenylsulfonyl, acetyl, or ethoxycarbonyl. Specifically, when R6 of Laridon is ethoxycarbonyl, the limitations of a C2-C5 alkoxy carbonyl as set forth in the instant claim 4 are met.

9. The examiner maintains the prior art reference of Laridon is applicable as stated above.

Allowable Subject Matter

10. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is an examiner's statement of reasons for the indication of allowable subject matter: review of the prior art failed to teach and/or disclose a photosensitive composition as set forth in the present claims further comprising an epoxy compound which contains at least two epoxy groups in the molecule.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHANCEITY N. ROBINSON whose telephone number is (571)270-3786. The examiner can normally be reached on Monday to Thursday: 7:30 am-6:00 pm eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Chanceity N Robinson/
Examiner, Art Unit 1795

/Amanda C Walke/

Primary Examiner, Art Unit 1795